

REMARKS

This Amendment, submitted in response to the Office Action dated April 25, 2007, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-35 are all the claims pending in the application.

I. Preliminary Matter

Applicant notes that Parmar (2004/0111529) and Cheng (USP 7,050,424) were cited in the body of the Office Action, however, they are not listed in the PTO -892. Therefore, Applicant requests that Parmar and Cheng be listed in a PTO-892.

II. Claim Objection

The Examiner has objected to claim 35 for an informality. The Examiner asserts that claim 35 should be amended to recite a system instead of a method. However, Applicant submits that claim 35 was previously amended in the Preliminary Amendment filed on December 23, 2004 to recite a system instead of a method. Therefore, the objection to claim 35 should be withdrawn.

III. Rejection of claims 19-24 under 35 U.S.C. § 101

Claims 19-24 stand rejected under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter since they disclose abstract idea without providing a useful or tangible result.

Applicant has amended claim 19 to recite “providing a processed IPv6 packet” which Applicant believes is sufficient to address the Examiner’s rejection of claims 19-24.

IV. Rejection of claims 1-3, 14, 25, 27-30 and 32-34 under 35 U.S.C. § 102

Claims 1-3, 14, 25, 27-30 and 32-34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jiang (U.S. Pub. No. 2004/0153502; hereinafter “Jiang”).

An exemplary embodiment of the present invention is directed to a method and system for interconnecting IPv6 and IPv4 networks that enable a plurality of network address translation-protocol translation (NAT-PT) apparatuses to share data processing information among themselves using a redirected message defined in a neighbor discovery protocol (NDP).

See para. [22] of the Applicant’s specification.

Jiang is directed to an enhanced Domain Name Service (DNS) which is capable of direct link connections and address and protocol translation functions. See para. [0027].

Claim 1

Claim 1 recites:

A system for interconnecting an Internet protocol version 6 (IPv6) network and an Internet protocol version 4 (IPv4) network, comprising IP packet transmitting apparatuses transmitting IP packets between IPv6 nodes and IPv4 nodes and including:

a first IP packet transmitting apparatus transmitting IP packets; and

a second IP packet transmitting apparatus transmitting IP packets when the number of IP packets to be transmitted exceeds the processing capacity of the first IP packet transmitting apparatus,

wherein the first and second IP packet transmitting apparatuses share processing state information of the IP packets using a predetermined message.

The Examiner asserts that para. [0040] of Jiang teaches this aspect of claim. Para. [0040] of Jiang discloses that load information is exchanged between the NAT-PT1 and NAT-PT2 and

the enhanced DNS server is indicated by double arrows. Therefore, Jiang discloses that NAT-PT1 and NAT-PT2 are each individually capable of exchanging information with the DNS server (e.g. Fig. 1, E_DNS1). However, there is no teaching or suggestion that NAT-PT1 and NAT-PT2 share processing state information with each other. See Fig. 5.

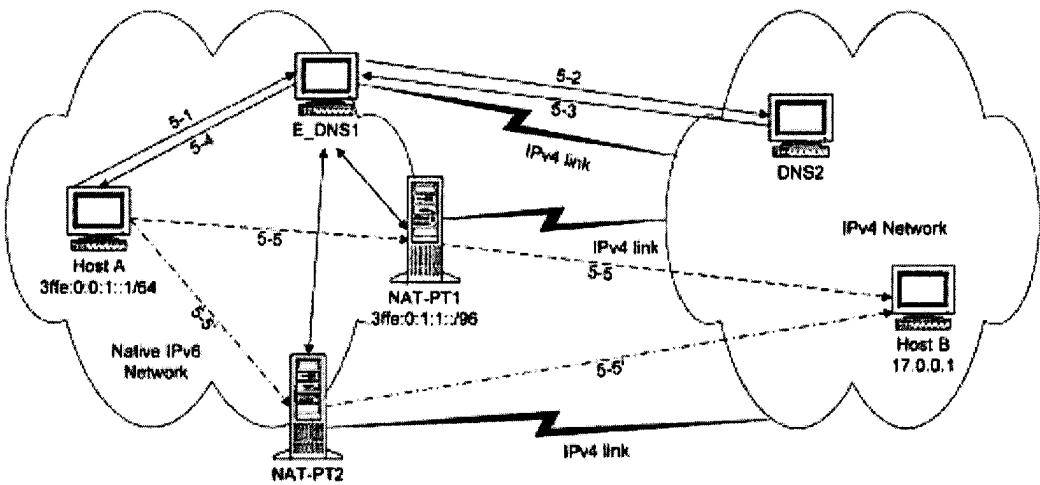


Fig. 5

Further, there is no teaching or suggestion of a predetermined message used for sharing processing state information. Further, there is no teaching or suggestion that a second IP packet transmitting apparatus transmitting IP packets when the number of IP packets to be transmitted exceeds the processing capacity of the first IP packet transmitting apparatus.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable. To the extent independent claims 3, 14 and 25 recite similar elements, claims 3, 14 and 25 and their dependent claims should be deemed allowable for at least the same reasons.

Claims 27 and 32

Applicant has amended claims 27 and 32 to include the subject matter of claims 30 and 34, respectively, which Applicant submits is not disclosed in the art cited by the Examiner.

Specifically, Jiang does not disclose “the apparatus for transmitting IP packets with the least load being identified by using a predetermined message regarding information on the load of the at least one apparatus for transmitting IP packets” as claimed.

Consequently, claims 27 and 32 should be deemed allowable.

V. Rejection of claims 4 and 15 under 35 U.S.C. § 103

Claims 4 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jiang in view of Parmar (U.S. Pub. No. 2004/0111529; hereinafter “Parmar”). Claims 4 and 15 should be deemed allowable by virtue of their dependency to claims 1 and 14 for at least the reasons set forth above. Moreover, Parmar does not cure the deficiencies of Jiang.

Claim 4

Claim 4 recites “wherein the predetermined message (through which the first and second IP packet transmitting apparatuses share processing state information of the IP packets) is an Internet control message protocol version 6 (ICMPv6) redirect message defined in a neighbor discovery protocol (NDP).” The Examiner concedes that Jiang does not teach this aspect of the claim and cites Parmar to cure the deficiency.

Parmar is directed to balancing the load on a network by directing global network trafficking according to load information to ensure balanced utilization of Internet Service Providers (ISP). See Abstract and para. [0007]. However, Parmar is not at all concerned with sharing information between a first NAT-PT and a second NAT-PT, let alone that the sharing of information between the first and second NAT-PT is through a predetermined message as claimed.

For at least the above reasons, claim 4 should be deemed allowable. To the extent claim 15 recites similar elements, it should be deemed allowable for at least the same reasons.

VI. Rejection of claims 5 and 16 under 35 U.S.C. § 103

Claims 5 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jiang in view of Parmar and in further view of RFC 2461. Claims 5 and 16 should be deemed allowable by virtue of their dependency to claims 1 and 14 for at least the reasons set forth above. Moreover, Parmar and RFC 2461 do not cure the deficiencies of Jiang.

Claim 5 recites:

"wherein the ICMPv6 redirect message comprises:
a flag bit that indicates the processing state of the first NAT-PT apparatus; and
a target address field which stores the address of the second NAT-PT apparatus adjacent to the first NAT-PT apparatus."

The Examiner asserts that the reserved field and target address field as discussed in section 4.5 on page 25 of RFC 2461 teaches this aspect of the claim. RFC 2461 discloses that the reserved field is unused and is initialized to zero by a sender. The target address is an IP address that is a better first hop to use for the ICMP destination address. However, there is no teaching or suggestion that the reserved field and the target address field contain information regarding a first and second NAT-PT apparatus, respectively, as claimed.

Consequently, claim 5 should be deemed allowable. To the extent claim 16 recites similar elements, it should be deemed allowable for at least the same reasons.

VII. Rejection of claims 6 and 17 under 35 U.S.C. § 103

Claims 6 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jiang in view of Cheng et al. (U.S. Patent No. 7,050,424; hereinafter "Cheng"). Claims 6 and 17 should be deemed allowable by virtue of their dependency to claims 3 and 14 for at least the reasons set forth above. Moreover, Cheng does not cure the deficiencies of Jiang.

VIII. Rejection of claims 7 and 18 under 35 U.S.C. § 103

Claims 7 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jiang in view of Zhang et al. (U.S. Pub. No. 2004/0001509; hereinafter “Zhang ‘509”) and in further view of Cheng. Claims 7 and 18 should be deemed allowable by virtue of their dependency to claims 3 and 14 for at least the reasons set forth above. Moreover, Zhang ‘509 and Cheng do not cure the deficiencies of Jiang.

IX. Rejection of claims 8, 9, 19, 20 and 26 under 35 U.S.C. § 103

Claims 8, 9, 19, 20 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang ‘509 in view of Cheng.

Claim 8 recites “a determination unit which receives an IPv6 packet and determines whether or not the received IPv6 packet is to be processed according to the current packet processing state of the NAT-PT apparatus.” The Examiner asserts that the NAT-PT of Zhang ‘509 which receives an IPv6 packet teaches the claimed determination unit.

The Examiner concedes that Zhang ‘509 does not teach according to the current packet processing state of the NAT-PT apparatus and cites Cheng Fig. 3, element 56 to cure the deficiency. The aspect of Cheng cited by the Examiner discloses that when the workload of a primary proxy server is over a predefined threshold, then a request is forwarded to the next predefined proxy server until a proxy server able to hand a call is found. However, there is no teaching or suggestion of determining whether or not a received IPv6 packet is to be processed according to the current packet processing state of the NAT-PT apparatus, as claimed.

Consequently, claim 8 and its dependent claims should be deemed allowable. To the extent claims 19 and 26 recite similar elements, claims 19 and 26 and their dependent claims should be deemed allowable for at least the same reasons.

X. Rejection of claims 10, 11, 21 and 22 under 35 U.S.C. § 103

Claims 10, 11, 21 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang ‘509 in view of Cheng and further in view of Parmar. Claims 10, 11, 21, and 22 should be deemed allowable by virtue of their dependency to claims 8 and 19 for at least the reasons set forth above. Moreover, Cheng and Parmar do not cure the deficiencies of Zhang ‘509.

XI. Rejection of claims 12 and 23 under 35 U.S.C. § 103

Claims 12 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang ‘509 in view of Cheng and further in view of Parmar and RFC 2461. Claims 12 and 23 should be deemed allowable by virtue of their dependency to claims 8 and 19 for at least the reasons set forth above. Moreover, Cheng, Parmar and RFC 2461 do not cure the deficiencies of Zhang ‘509.

XII. Rejection of claims 31 and 35 under 35 U.S.C. § 103

Claims 31 and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang ‘509 in view of Malinen et al. (U.S. Pub. No. 2003/0028763; hereinafter “Malinen”) and further in view of Zhang et al. (U.S. Patent No. 6,526,450; hereinafter “Zhang ‘450”). Claims 31 and 35 should be deemed allowable by virtue of their dependency to claims 27 and 32 for at least the reasons set forth above. Moreover, Malinen and Zhang ‘450 do not cure the deficiencies of Zhang ‘509.

XIII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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